



DESCRIPTION

The BAV99L is available in SOT-23 Package.

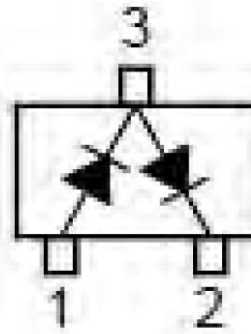
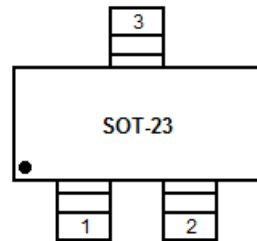
FEATURES

- Fast Switching Speed
- For General Purpose Switching Applications
- High Conductance
- Available in SOT-23 Package

ORDERING INFORMATION

| Package Type | Part Number |
|--|--------------------|
| SOT-23 | BAV99L |
| Note | SPQ: 3,000pcs/Reel |
| AiT provides all RoHS Compliant Products | |

PIN DESCRIPTION





ABSOLUTE MAXIMUM RATINGS

$T_A = 25^\circ\text{C}$

| | |
|--|---------------|
| V_{RRM} , Repetitive Peak Reverse Voltage | 85V |
| V_R , Continuous Reverse Voltage | 75V |
| I_F , Continuous Forward Current (Double Diode Loaded) | 125mA |
| I_F , Continuous Forward Current (Single Diode Loaded) | 215mA |
| I_{FRM} , Repetitive Peak Forward Current | 450mA |
| I_{FSM} , Non-Repetitive Peak Forward Surge Current | |
| $t = 1.0\mu\text{s}$ | 4.5A |
| $t = 1.0\text{ms}$ | 1.0A |
| $t = 1.0\text{s}$ | 0.5A |
| P_{TOT} , Power Dissipation | 350mW |
| T_J , Junction Temperature | 150°C |
| T_{STG} , Storage Temperature Range | -65°C ~+150°C |

Stresses above may cause permanent damage to the device. These are stress ratings only and functional operation of the device at these or any other conditions beyond those indicated in the Electrical Characteristics are not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

ELECTRICAL CHARACTERISTICS

$T_A = 25^\circ\text{C}$

| Parameter | Symbol | Conditions | Min | Max | Unit |
|-----------------------|----------|--|-----|-------|---------------|
| Forward Voltage | V_F | $I_F = 1.0\text{mA}$ | - | 0.715 | V |
| | | $I_F = 10\text{mA}$ | - | 0.855 | |
| | | $I_F = 50\text{mA}$ | - | 1 | |
| | | $I_F = 150\text{mA}$ | - | 1.25 | |
| Reverse Current | I_R | $V_R = 25\text{V}$ | - | 30 | nA |
| | | $V_R = 75\text{V}$ | - | 1 | μA |
| | | $V_R = 25\text{V}, T_J = 150^\circ\text{C}$ | - | 30 | |
| | | $V_R = 75\text{V}, T_J = 150^\circ\text{C}$ | - | 50 | |
| Diode Capacitance | C_D | $V_R = 0\text{V}, f = 1.0\text{MHz}$ | - | 1.5 | pF |
| Reverse Recovery Time | t_{rr} | $I_F = I_R = 10\text{mA}, i_{R(\text{REC})} = 1.0\text{mA}, R_L = 100\Omega$ | - | 4 | ns |



TYPICAL CHARACTERISTICS

Figure 1. Forward Characteristics

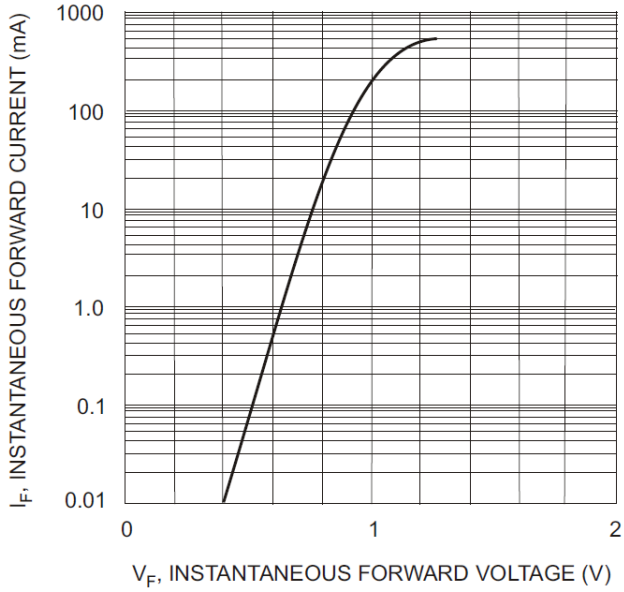


Figure 2. Typical Leakage Current vs. Reverse Voltage

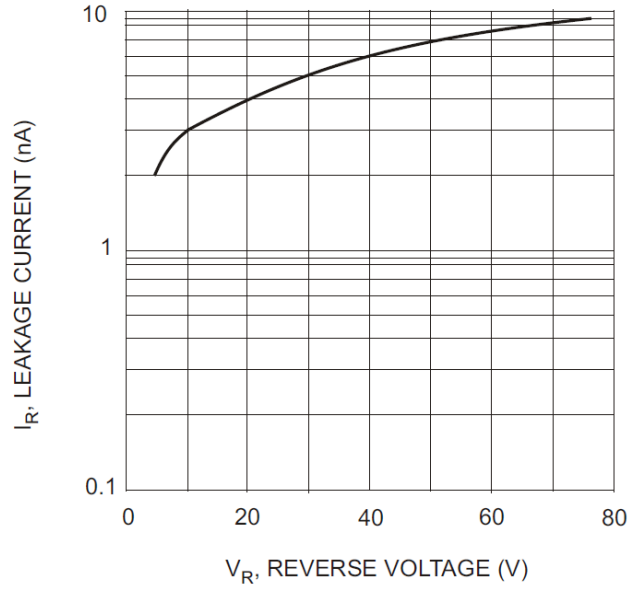
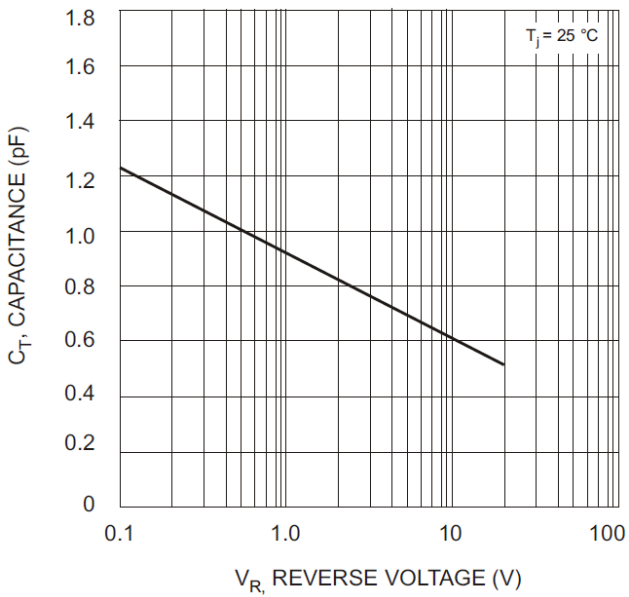


Figure 3. Typical Total Capacitance vs. Reverse Voltage

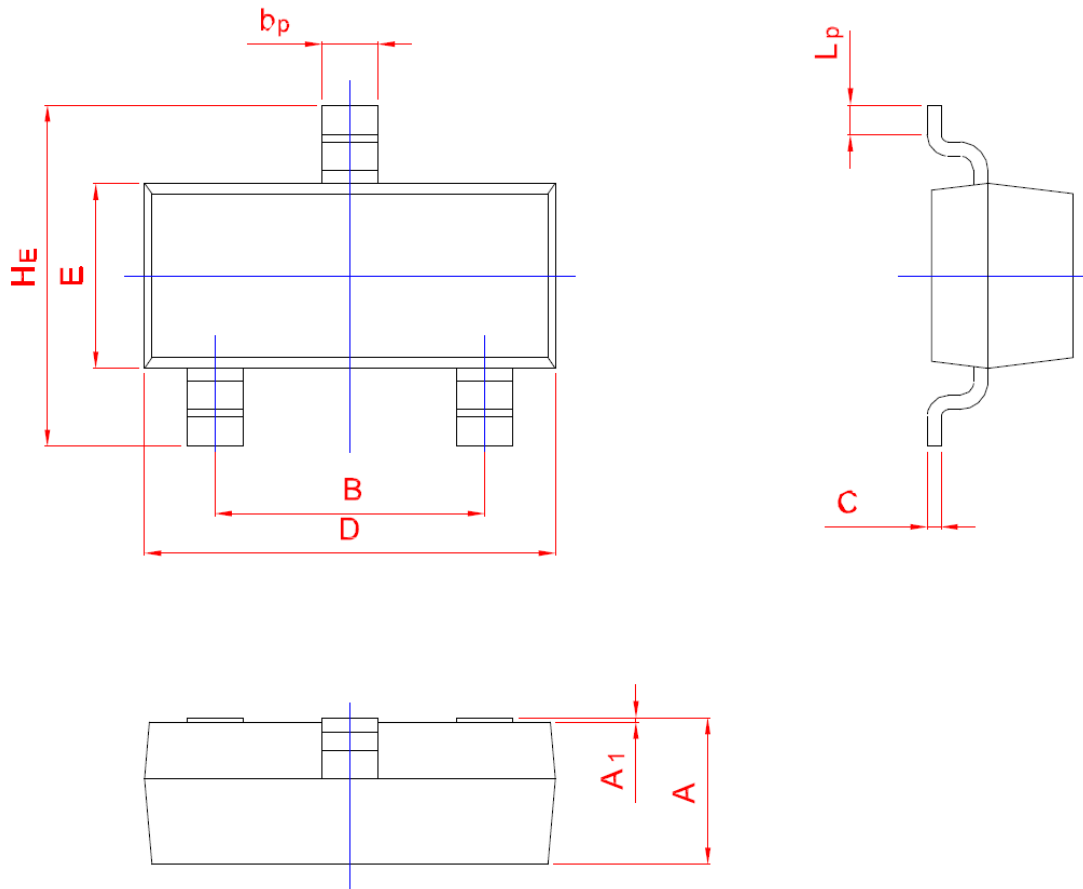




PACKAGE INFORMATION

Dimension in SOT-23 Package (Unit: mm)

Plastic surface mounted package; 3 leads



| UNIT | A | B | b_p | C | D | E | H_E | A_1 | L_p |
|------|------|------|-------|------|------|------|-------|-------|-------|
| mm | 1.40 | 2.04 | 0.50 | 0.19 | 3.10 | 1.65 | 3.00 | 0.100 | 0.50 |
| | 0.95 | 1.78 | 0.35 | 0.08 | 2.70 | 1.20 | 2.20 | 0.013 | 0.20 |



IMPORTANT NOTICE

AiT Semiconductor Inc. (AiT) reserves the right to make changes to any its product, specifications, to discontinue any integrated circuit product or service without notice, and advises its customers to obtain the latest version of relevant information to verify, before placing orders, that the information being relied on is current.

AiT Semiconductor Inc.'s integrated circuit products are not designed, intended, authorized, or warranted to be suitable for use in life support applications, devices or systems or other critical applications. Use of AiT products in such applications is understood to be fully at the risk of the customer. As used herein may involve potential risks of death, personal injury, or server property, or environmental damage. In order to minimize risks associated with the customer's applications, the customer should provide adequate design and operating safeguards.

AiT Semiconductor Inc. assumes to no liability to customer product design or application support. AiT warrants the performance of its products of the specifications applicable at the time of sale.